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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,453	01/09/2004	Cheol-Soo Jung	51752/DBP/Y35	7997

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EXAMINER

MARTIN, ANGELA J

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/754,453

Applicant(s)

JUNG ET AL.

Examiner

Angela J. Martin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is responsive to the Remarks/Arguments filed on April 20, 2006.

Applicant's arguments, with respect to the rejection(s) of claim(s) 1-17 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made for the following reasons of record.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang et al., US 6,783,897 B2.

Rejection of claims 1-17 drawn to a nonaqueous electrolyte.

Kang et al., teach a nonaqueous electrolyte (col. 3, lines 46-53) comprising a cyclic carbonate, a lithium salt (col. 8, lines 3-67 and col. 9, lines 1-12), and a polyether-modified silicon oil as described in claim 1 (abstract; col. 22). It teaches a chain carbonate (col. 9, lines 1-12). It teaches a rechargeable lithium battery comprising a positive and negative electrode (col. 2, lines 46-58), and polyether-modified silicon oil as described in claim 6 (col. 22). It teaches the negative electrode comprises a layer of polyacrylate (col. 13, lines 45-67). It teaches a chain carbonate (col. 24, lines 44-47 and col. 25, lines 1-2).

Thus, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because although it does not recite the viscosity and flash point of the silicon oil, these properties would be characteristic features of the silicon oil since the formulas are equivalent. In addition, although it does not recite a fluorinated cyclic carbonate, it does list cyclic carbonates.

3. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda et al., JP 2003229019 (abstract).

Rejection of claims 1-17 drawn to a nonaqueous electrolyte.

Noda et al., teach a nonaqueous electrolyte (abstract) comprising a polyether-modified silicon oil as described in claim 1 and claim 6 (search report).

Thus, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because although it does not recite the viscosity and flash point of the silicon oil, these properties would be characteristic features of the silicon oil since the formulas are equivalent. In addition, although it does not recite a fluorinated cyclic carbonate, it does list cyclic carbonates.

4. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horie, JP 2003142157 (abstract).

Rejection of claims 1-17 drawn to a nonaqueous electrolyte.

Horie teach a nonaqueous electrolyte (abstract) comprising a polyether-modified silicon oil as described in claim 1 and claim 6 (search report).

Thus, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because although it does not recite the

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viscosity and flash point of the silicon oil, these properties would be characteristic features of the silicon oil since the formulas are equivalent. In addition, although it does not recite a fluorinated cyclic carbonate, it does list cyclic carbonates.

Response to Arguments

5. Applicant's arguments with respect to above claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela J. Martin whose telephone number is 571-272-1288. The examiner can normally be reached on Monday-Friday from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

